



UNITED STATES PATENT AND TRADEMARK OFFICE

DCG
UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/633,365	08/01/2003	Ronald Cleveland	2293.2011-001	5132
21005	7590	08/02/2005	EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C. 530 VIRGINIA ROAD P.O. BOX 9133 CONCORD, MA 01742-9133			TRIEU, VAN THANH	
		ART UNIT	PAPER NUMBER	2636

DATE MAILED: 08/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/633,365	CLEVELAND ET AL.	
	Examiner	Art Unit	
	Van T Trieu	2636	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 12 May 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) 1-32 is/are allowed.
- 6) Claim(s) 23-27 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

1. Claims 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Ragland et al [US 6,437,702]** in view of **Stringer [US 6,298,009]**.

Regarding claim 23, the claimed an apparatus for detecting an object in a trailer comprising a long-range sensor mounted along a nose wall of the trailer (the transceiver assembly 120 having ultrasonic transmitting sensors 204 and 206 mounted on the rear wall of a freight car 108, radiating to cover a large/long range 122 and a proximity/short range 124, see Figs. 1, 2 and 7, col. 1, lines 62-67, col. 2, lines 1-45, col. 3, lines 21-52,

col. 4, lines 30-67 and col. 5, lines 1-40); but **Ragland et al** fails to disclose the power source electrically connected to the sensor. However, **Ragland et al** teaches that the ultrasonic transceiver assembly 120 is electrically connected to controller 126 for transmitting report information to a remote base/center station via antenna 128, see Fig. 1, col. 3, lines 27-67 and col. 4, lines 1-67 and col. 5, lines 1-53. Since the ultrasonic transceiver assembly and electronic/computer controller are powered by electricity for operation, it would have been obvious to one skill in the art to recognize that the ultrasonic transceiver assembly is electrically powered by the battery of a tractor/trailer or by an independent battery from the tractor/trailer. **Ragland et al** also fails to disclose the atmosphere absorption compensation module connected to the sensor. However, **Ragland et al** teaches that the ultrasonic sensors 204 and 206 are connected to a controller 126 for controlling the prescribed time takes into consideration the radius 122a, 124a, and also consider the expected humidity and temperature of air in the freight car, frequency of transmitted ultrasonic signal etc, see Figs. 1-4, col. 6, lines 37-50. **Stringer** suggests that the ultrasonic sensors 12, 14 and 16 are used to detect the presence and absence of an object in the near field of the reflected ultrasonic wave sensors. The ultrasonic sensors 12, 14 and 16 are desirable for compensating temperature, pressure and humidity, which is controlled by a processor controller 180 to processing the measured traveling time to compensate for variations in humidity, temperature and pressure in order to produce a more accurate result, see Figs. 1, 6 and 7, col. 5, lines 30-36, col. 8, lines 63-67, col. 9, lines 1-27 and col. 13, lines 33-38. Therefore, it would have been obvious to one skill in the art at the time the invention

was made to substitute atmospheric compensation of the transducer sensor connected to the processor controller of **Stringer** for the sensor and controller of **Ragland et al** in order to compensate for temperature, pressure and humidity inside the cargo trailer for producing a higher accuracy of detecting objects or articles within the cargo trailer.

Regarding claim 24, the claimed at least one sensor sensing an atmospheric condition, which reads upon the combination of the atmospheric absorption compensation between **Ragland et al** and **Stringer** in respect to 23 above, wherein **Stringer** teaches that the control unit 200 processing the measured traveling time to compensate for variations in humidity, temperature and pressure in order to produce a more accurate result, see Figs. 1, 6 and 7, col. 5, lines 30-36, col. 8, lines 63-67, col. 9, lines 1-27 and col. 13, lines 33-38.

Regarding claim 25, all the claimed subject matters are discussed between **Ragland et al** and **Stringer** in respect to claim 24 above.

Regarding claim 26, all the claimed subject matters are discussed between **Ragland et al** and **Stringer** in respect to claims 23 above.

Regarding claim 27, all the claimed subject matters are discussed between **Ragland et al** and **Stringer** in respect to claim 23 above.

Response to Arguments

2. Applicant's arguments filed on 12 May 2205 have been fully considered but they are not persuasive. Because,

Applicant's arguments:

(A) **Ragland et al** specifically does not cover the whole trailer space, there would be no motivation to combine the crude detection system of **Ragland et al** with the precise measurement system of **Stringer**.

(B) Neither **Ragland et al** nor **Stringer** teach a long-range sensor that is connected to an atmospheric absorption compensation module.

Response to the arguments:

(A) Claims 23-27 do not claimed of the sensor for covering the whole trailer space. The long-range sensor met by the transducers cover a larger/longer range.

(B) It is obvious to combine the processor controller as an atmospheric absorption compensation module connected to the sensor of **Stringer** because **Rangland et al** suggests that the ultrasonic sensors are connected to a controller for controlling the prescribed time takes into consideration the radius 122a, 124a, and also consider the expected humidity and temperature of air in the freight car, frequency of transmitted ultrasonic signal etc..

Conclusion

3. Claims 1-22 and 28-32 are allowable over the prior art.

Art Unit: 2636

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from examiner should be directed to primary examiner **Van Trieu** whose telephone number is (571) 272-2972. The examiner can normally be reached on Mon-Fri from 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. **Jeffery Hofsass** can be reached on (571) 272-2981.



Van Trieu
Primary Examiner
Date: 7/27/05